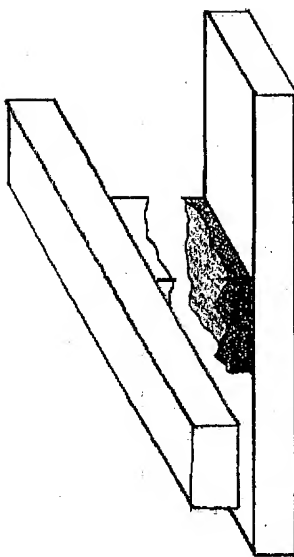
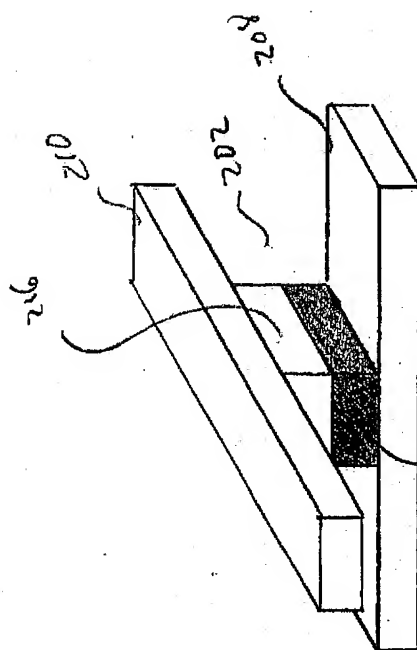


Figure 1



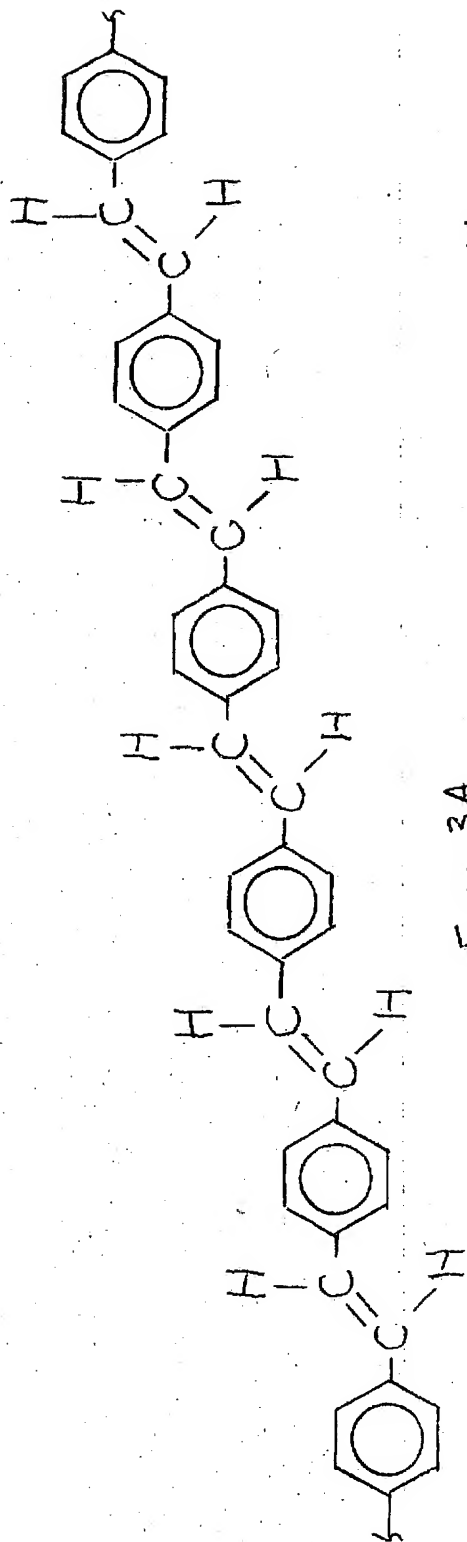


Figure 3A

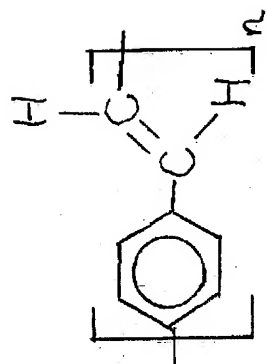


Figure 3B

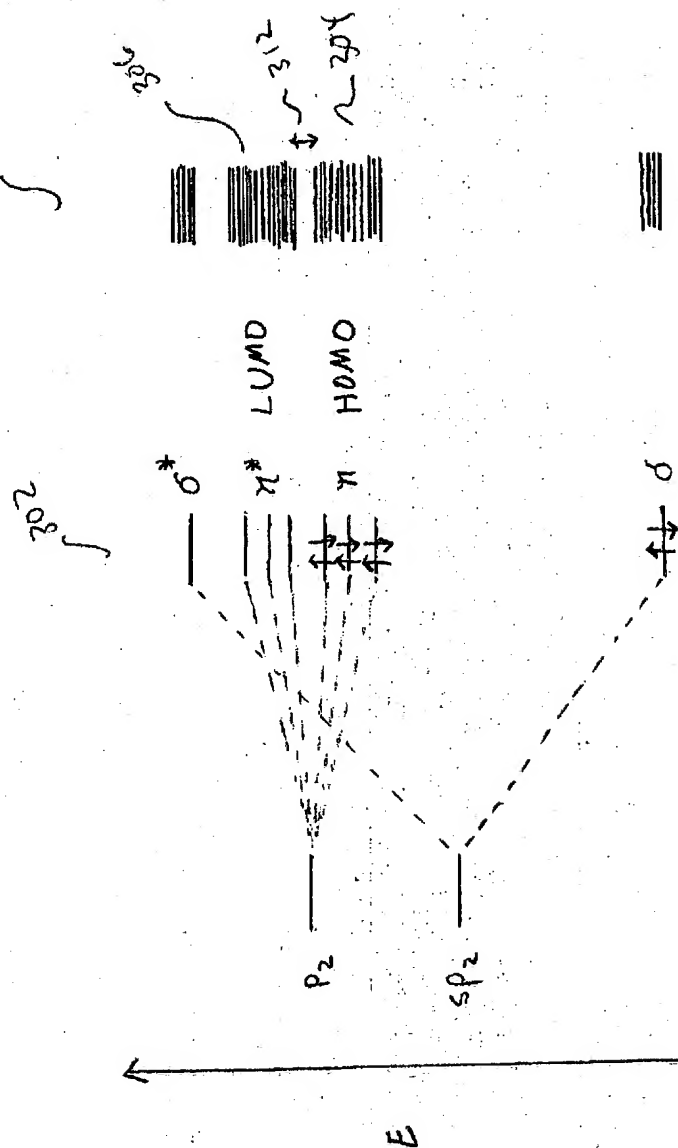


Figure 3C

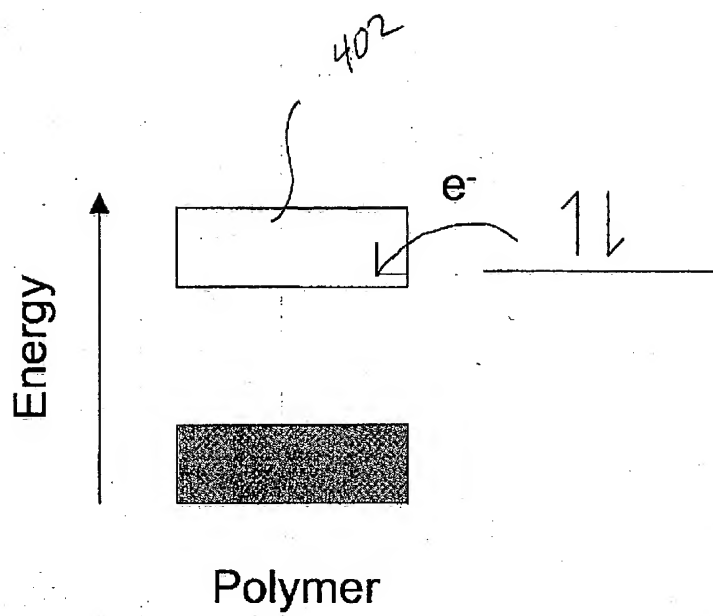


Figure 4A

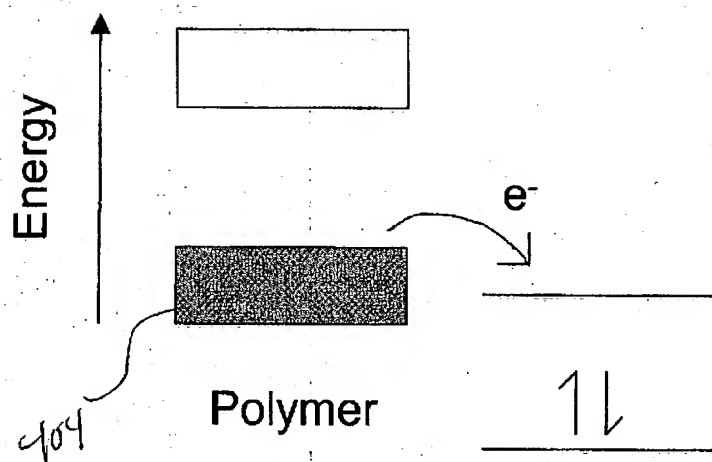


Figure 4B

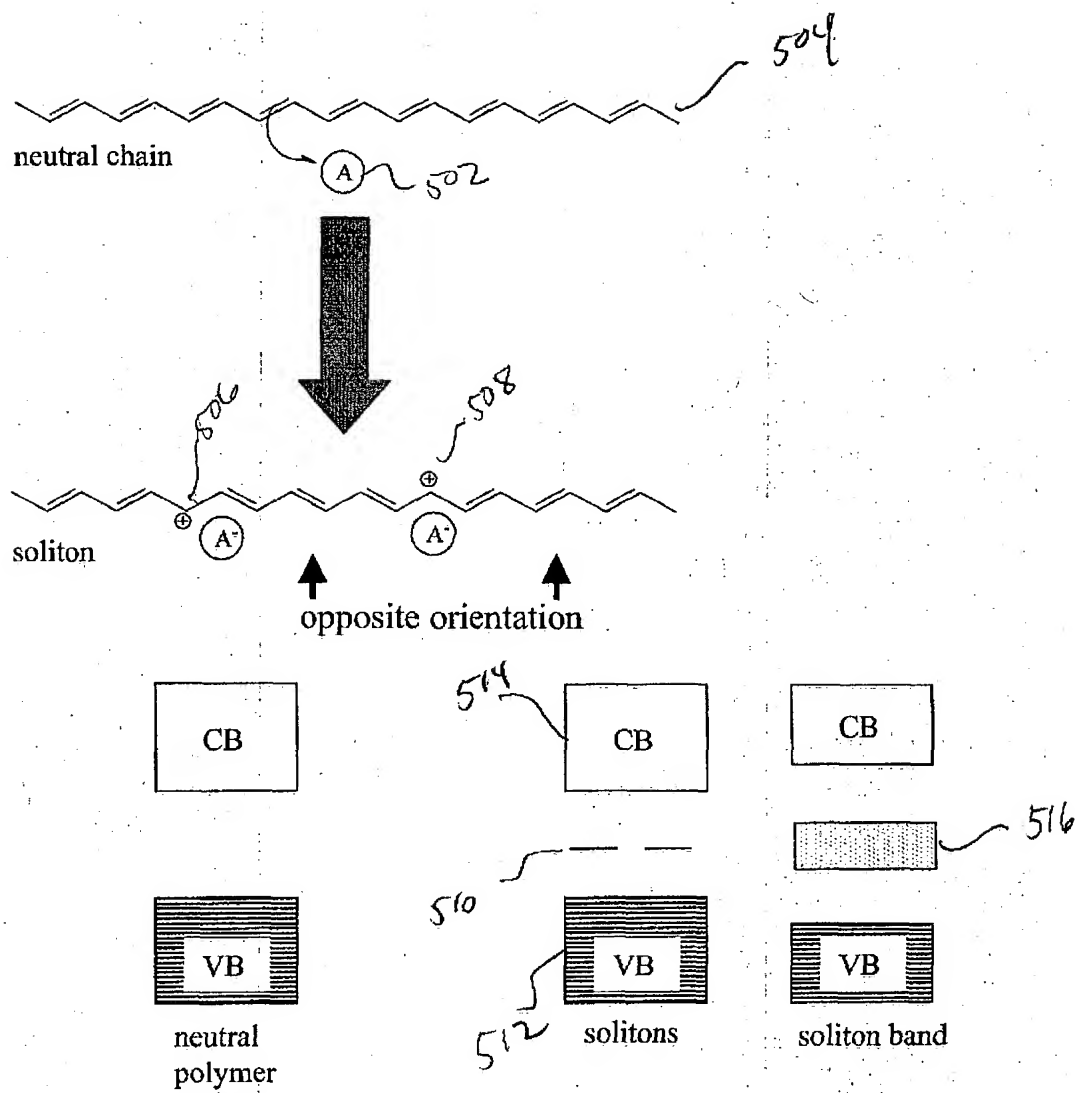


Figure 5

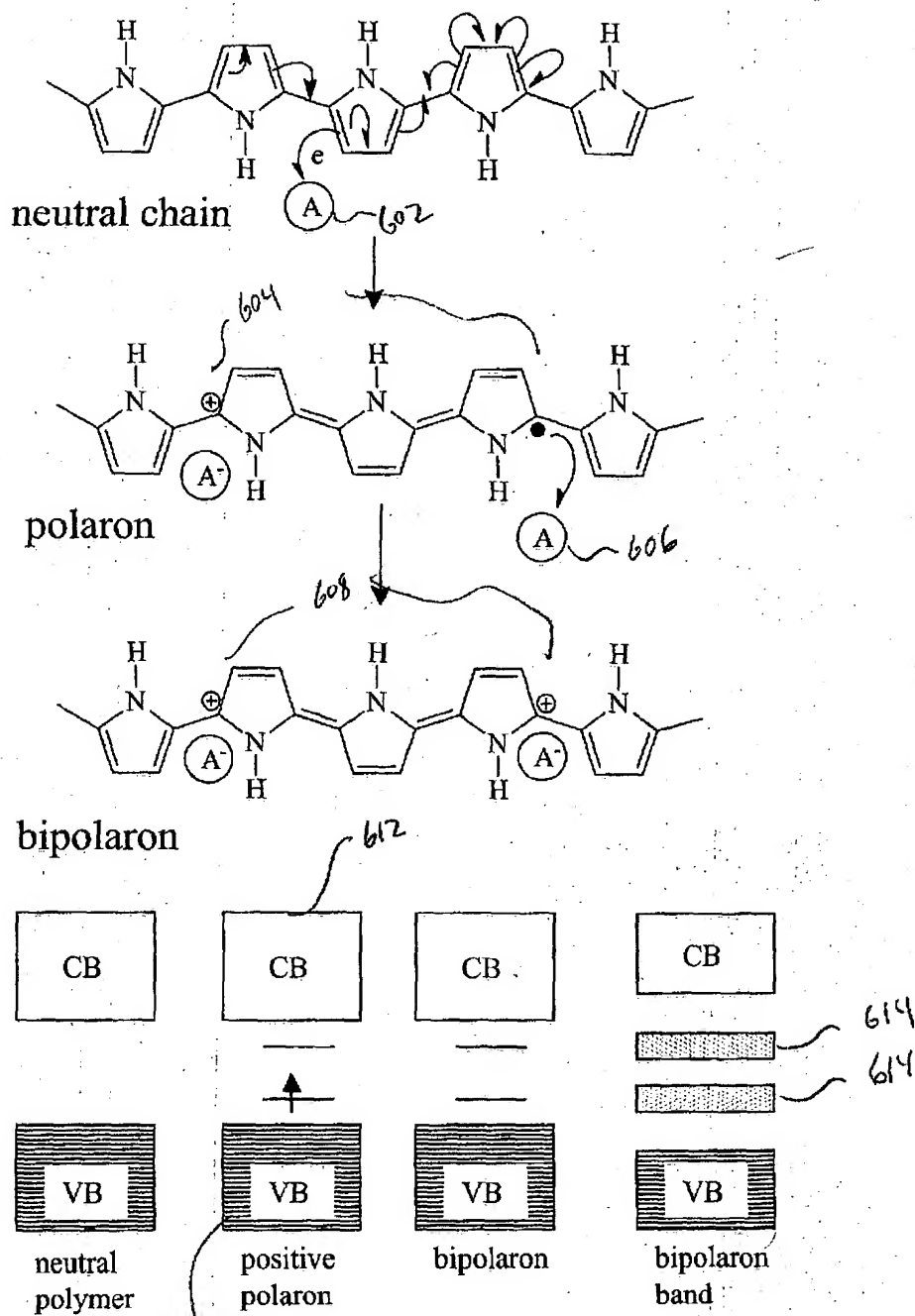


Figure 6

610








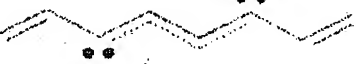
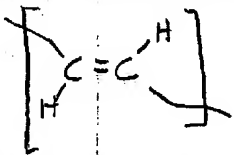
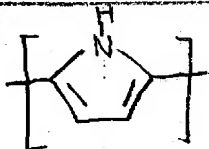
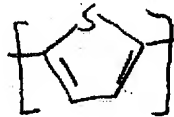
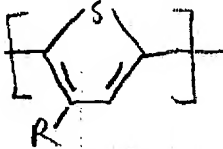
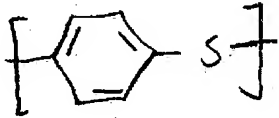
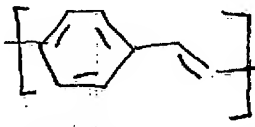

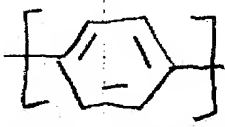
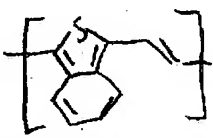
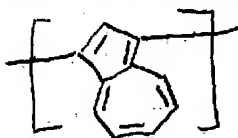
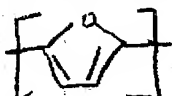

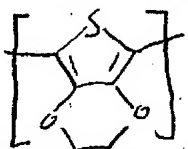
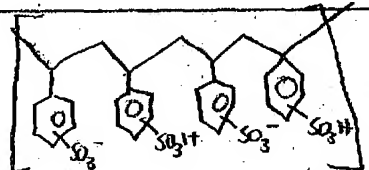
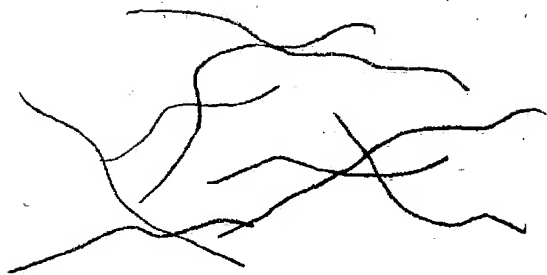
vacuum state		undisturbed conjugation
neutral soliton		free radical
positive soliton		carbocation (carbenium ion)
negative soliton		carbanion
positive polaron		radical cation
negative polaron		radical anion
positive bisoliton (bipolaron)		carbocation
negative bisoliton (bipolaron)		carbodianion

Figure 7

polymer	structure	dopants
polyacetylene		I_2, Br_2, Li, Na, AsF_5
polypyrrole		BF_4^-, ClO_4^-
polythiophene		BF_4^-, ClO_4^-
poly(3-alkylthiophene)		BF_4^-, ClO_4^-
polyphenylene sulphide		AsF_5
polyphenylenevinylene		AsF_5
polythienylenevinylene		AsF_5
polyphenylene		AsF_5, Li, Na

polymer	structure	dopants
polyisothianaphthalene		BF_4^- , ClO_4^-
polyazulene		BF_4^- , ClO_4^-
polyfuran		BF_4^- , ClO_4^-
polyaniline		HCl
poly(3,4-ethylene dioxythiophene)		

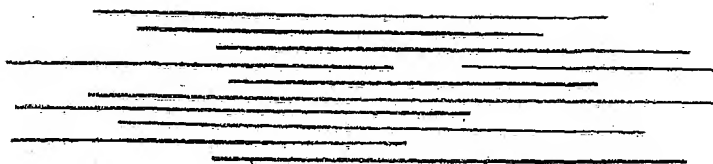
904



910

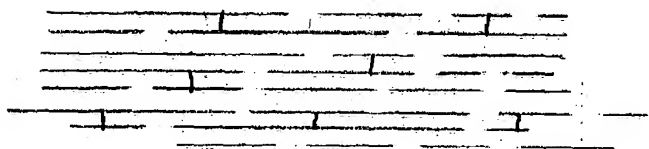
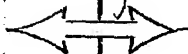
902

700

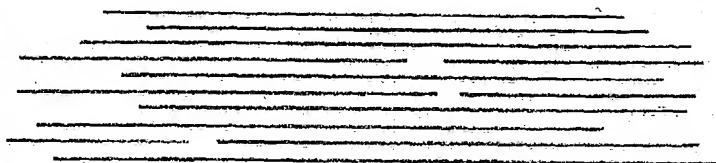


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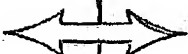
908



914



916



922

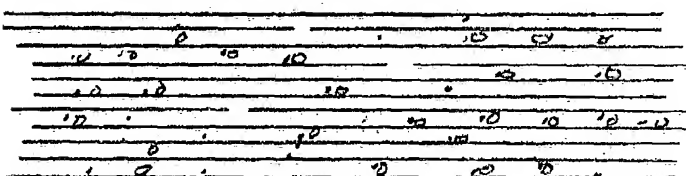
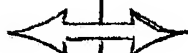


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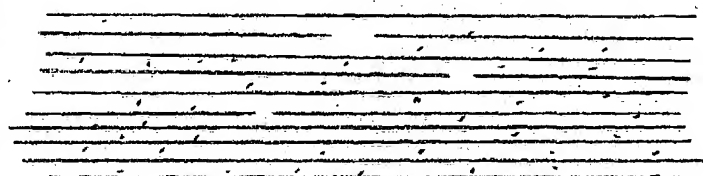
924



920

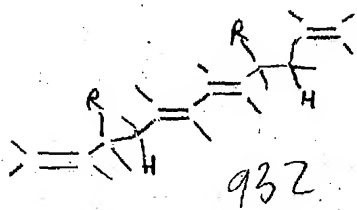
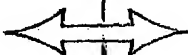


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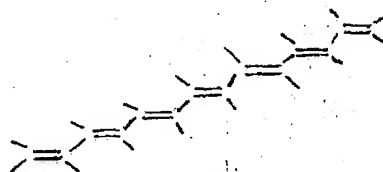


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928



932



934

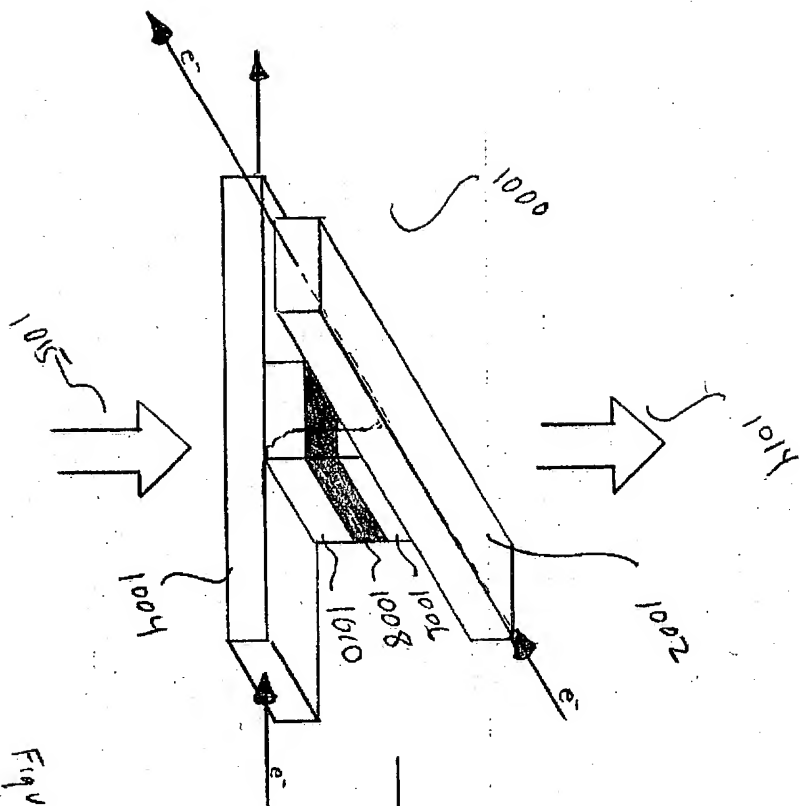
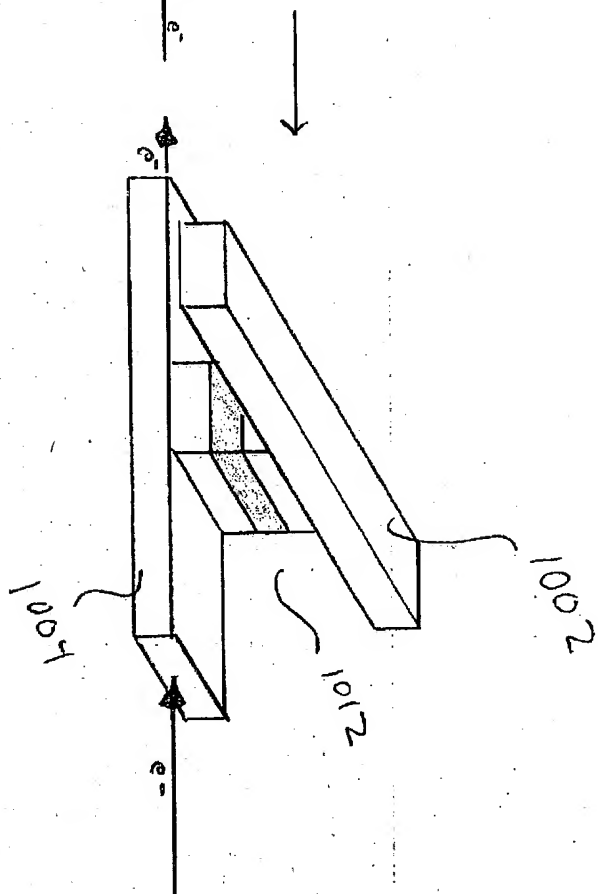


Figure 10



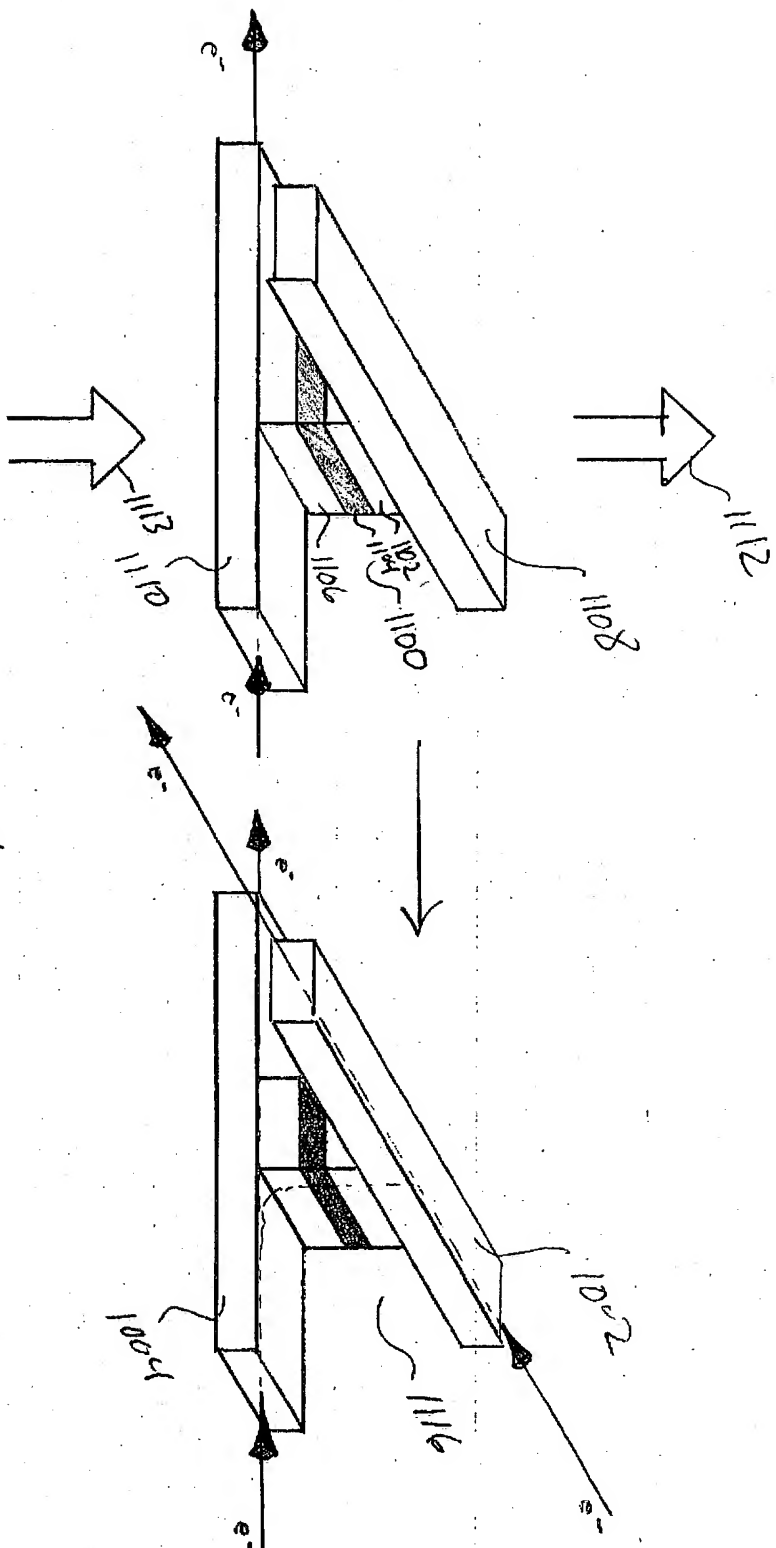


Figure 11